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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. 2004-SW-15-AD; Amendment 39-13803; AD 2004-19-09]

RIN 2120-AA64

Airworthiness Directives; Robinson Helicopter Company Model R22-Series Helicopters

AGENCY: Federal Aviation Administration, DOT.

ACTION: Final rule; request for comments.

SUMMARY: This amendment supersedes an existing emergency airworthiness directive (AD) for the Robinson Helicopter Company (Robinson) Model R22, R22 Alpha, R22 Beta, and R22 Mariner helicopters, that currently requires track-and-balancing certain main rotor blades (blades), replacing blades, and determining the age of each blade and revising the component history card or equivalent maintenance record. This amendment requires the same actions, but changes the applicability and adds clarifying language. It also prohibits the issuance of special flight permits, which the existing AD allows. This amendment is prompted by the need to clarify the existing AD language. The actions specified by this AD are intended to prevent a fatigue crack, blade failure, and subsequent loss of control of the helicopter.

DATES: Effective October 7, 2004.

Comments for inclusion in the Rules Docket must be received on or before November 22, 2004.

ADDRESSES: Submit comments in triplicate to the Federal Aviation Administration (FAA), Office of the Regional Counsel, Southwest Region, Attention: Rules Docket No. 2004-SW-15-AD, 2601 Meacham Blvd., Room 663, Fort Worth, Texas 76137. You may also send comments electronically to the Rules Docket at the following address: *9-asw-adcomments@faa.gov*.

FOR FURTHER INFORMATION CONTACT: Fred Guerin, Aviation Safety Engineer, FAA, Los Angeles Aircraft Certification Office, Airframe Branch, 3960 Paramount Blvd., Lakewood, California 90712, telephone (562) 627-5232, fax (562) 627-5210.

SUPPLEMENTARY INFORMATION: On March 18, 2004, the FAA issued emergency AD 2004-06-52, Docket 2004-SW-01-AD, to require:

- Within 10 hours time-in-service (TIS) or 30 days, whichever occurs first, track-and-balancing blades that are 5 years old or have 1,000 hours TIS;

- Replacing the blades with airworthy blades before further flight if an abnormal increase in vibration occurs within 5 hours TIS after the last track-and-balance;
- Within 10 hours TIS or 30 days, whichever occurs first, for helicopters with blades, part number (P/N) A016-1, replacing the blades with airworthy blades other than blades, P/N A016-1, on or before reaching 2,000 hours TIS;
- Within 10 hours TIS or 30 days, whichever occurs first, for helicopters with blades, P/N A016-2, replacing the blades with airworthy blades other than blades, P/N A016-1, on or before reaching 2,200 hours TIS or 10 years, whichever occurs first; and
- Within 10 hours TIS or 30 days, whichever occurs first, determining the age of each blade and revising the component history card or equivalent maintenance record for blades, P/N A016-2, by adding a 10-year retirement life to the current 2,200 hours TIS retirement life.

That action was prompted by two accidents that occurred in Australia and Israel that were attributed to failure of a blade. Investigation revealed that corrosion from water penetration initiated a fatigue crack in a blade. Information from the accident investigations revealed that the cracked blades manifested an increase in helicopter vibration. Following a track-and-balance of the blades, the vibrations would go back to normal for a short time and then slowly increase again until blade failure occurred. That condition, if not corrected, could result in a fatigue crack, blade failure, and subsequent loss of control of the helicopter.

Since issuing that AD, several commenters have called regarding the following issues:

- The AD does not include the start date for determining the age of the blades on Model R22 helicopters that have been overhauled by the manufacturer since these helicopters are returned to the owner with new blades, but only have a "return-to-service tag". The FAA agrees, and has included specific instructions for overhauled helicopters in this AD.
- Paragraph (d) of the emergency AD is unclear and has been interpreted by some to mean that all Model R22 helicopters with blades, P/N A016-2, installed, are grounded within 10 hours TIS or 30 days. While the FAA does not understand this interpretation, we have reworded the paragraph in this AD in an attempt to make it clearer. These blades must be replaced with airworthy blades on or before reaching their retirement life.
- Are the R22 Model Beta II and HP helicopters affected by the AD since they are not specifically listed in the Applicability section of the AD? The R22 Model Beta II and HP helicopters are commercial names for the R22 Beta and R22 and are not shown on the helicopter's type certificate. The required identification plate for each helicopter must contain the Model designation. These data plate model numbers are the ones listed in the type certificate and, as appropriate, in our ADs. However, the applicability statement has been restated in terms of the Model R22-series helicopters with blades, P/N A0126-1 or A016-2, installed. Our intent was and is to include in the applicability ALL Model R-22 helicopters with the affected blades installed, regardless of their commercial designation.
- "Yellow tags" are issued for any return to service of a part, whether new or not; does any "yellow tag" constitute the start of the calendar life of the blade? The AD has been reworded to clarify that only "yellow tags" delivered with the blade when new may be used to start the calendar life of the blade.

These changes justify issuing this superseding AD instead of publishing Emergency AD 2004-06-52 as a Final Rule in the Federal Register.

Since an unsafe condition has been identified that is likely to exist or develop on other Robinson Model R22 helicopters of the same type design, this AD supersedes AD 2004-06-52 to require:

- Within 10 hours TIS or 30 days, whichever occurs first, tracking-and-balancing blades, P/N A016-2, that are 5 or more years old, or have 1,000 or more hours TIS;
- Replacing the blades with airworthy blades, P/N A016-2, before further flight if an abnormal increase in vibration occurs within 5 hours TIS after the last track-and-balance;
- Within 10 hours TIS or 30 days, whichever occurs first, for helicopters with blades, P/N A016-1, replacing the blades with airworthy blades, P/N A016-2 or A016-4;

- Within 10 hours TIS or 30 days, whichever occurs first, for helicopters with blades, P/N A016-2, replacing the blades with airworthy blades on or before reaching 2,200 hours TIS or 10 years, whichever occurs first; and
- Within 10 hours TIS or 30 days, whichever occurs first, determining the age of each blade and revising the component history card or equivalent maintenance record for blades, P/N A016-2, by adding a 10-year retirement life to the current 2,200 hours TIS retirement life.

The short compliance time involved is required because the previously described critical unsafe condition can adversely affect the controllability and structural integrity of the helicopter. Therefore, the previously stated actions are required within a short timeframe and this AD must be issued immediately.

Since a situation exists that requires the immediate adoption of this regulation, it is found that notice and opportunity for prior public comment hereon are impracticable, and that good cause exists for making this amendment effective in less than 30 days.

The FAA estimates that this AD will affect 923 helicopters of U.S. registry. Track-and-balancing the blades, revising the component history card and maintenance manual, determining the age of each blade, and replacing blades, if necessary, will take approximately 11 work hours per helicopter to accomplish at an average labor rate of \$65 per work hour. Required parts will cost approximately \$25,000 (for 2 blades) per helicopter. Based on these figures, we estimate the total cost impact of the AD on U.S. operators to be \$7,584,945, assuming that most blades currently in service reach the TIS retirement life before reaching the calendar retirement life, and that at most, 277 helicopters will need their blades replaced.

Comments Invited

Although this action is in the form of a final rule that involves requirements affecting flight safety and, thus, was not preceded by notice and an opportunity for public comment, comments are invited on this rule. Interested persons are invited to comment on this rule by submitting such written data, views, or arguments as they may desire. Communications should identify the Rules Docket number and be submitted in triplicate to the address specified under the caption ADDRESSES. All communications received on or before the closing date for comments will be considered, and this rule may be amended in light of the comments received. Factual information that supports the commenter's ideas and suggestions is extremely helpful in evaluating the effectiveness of the AD action and determining whether additional rulemaking action would be needed.

Comments are specifically invited on the overall regulatory, economic, environmental, and energy aspects of the rule that might suggest a need to modify the rule. All comments submitted will be available in the Rules Docket for examination by interested persons. A report that summarizes each FAA-public contact concerned with the substance of this AD will be filed in the Rules Docket.

Commenters wishing the FAA to acknowledge receipt of their comments submitted in response to this rule must submit a self-addressed, stamped postcard on which the following statement is made: "Comments to Docket No. 2004-SW-15-AD." The postcard will be date stamped and returned to the commenter.

The regulations adopted herein will not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government. Therefore, it is determined that this final rule does not have federalism implications under Executive Order 13132.

The FAA has determined that this regulation is an emergency regulation that must be issued immediately to correct an unsafe condition in aircraft, and that it is not a "significant regulatory action" under Executive Order 12866. It has been determined further that this action involves an emergency regulation under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979). If it is determined that this emergency regulation otherwise would be significant under DOT

Regulatory Policies and Procedures, a final regulatory evaluation will be prepared and placed in the Rules Docket. A copy of it, if filed, may be obtained from the Rules Docket at the location provided under the caption ADDRESSES.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Safety.

Adoption of the Amendment

Accordingly, pursuant to the authority delegated to me by the Administrator, the Federal Aviation Administration amends part 39 of the Federal Aviation Regulations (14 CFR part 39) as follows:

PART 39—AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. Section 39.13 is amended by adding a new airworthiness directive (AD), Amendment 39-13803, to read as follows:

AIRWORTHINESS DIRECTIVE



Aircraft Certification Service
Washington, DC

U.S. Department
of Transportation
**Federal Aviation
Administration**

We post ADs on the internet at "www.faa.gov"

The following Airworthiness Directive issued by the Federal Aviation Administration in accordance with the provisions of Title 14 of the Code of Federal Regulations (14 CFR) part 39, applies to an aircraft model of which our records indicate you may be the registered owner. Airworthiness Directives affect aviation safety and are regulations which require immediate attention. You are cautioned that no person may operate an aircraft to which an Airworthiness Directive applies, except in accordance with the requirements of the Airworthiness Directive (reference 14 CFR part 39, subpart 39.3).

2004-19-09 Robinson Helicopter Company: Amendment 39-13803. Docket No. 2004-SW-15-AD. Supersedes Emergency AD 2004-06-52, Docket No. 2004-SW-01-AD.

Applicability: Model R22-series helicopters, with a main rotor blade (blade), part number (P/N) A016-1 or A016-2, installed, certificated in any category.

Compliance: Required as indicated, unless accomplished previously.

To prevent a fatigue crack, blade failure, and subsequent loss of control of the helicopter, accomplish the following:

(a) Within 10 hours time-in-service (TIS) or 30 days, whichever occurs first, for helicopters with blades, P/N A016-2, that are 5 or more years old, or have 1,000 or more hours TIS, track-and-balance the blades. If an abnormal increase in vibration occurs within 5 hours TIS after the last track and balance, before further flight, replace the blades with airworthy blades, P/N A016-2, that are less than 10 years old and have less than 2,200 hours TIS, or airworthy blades, P/N A016-4, that are less than 12 years old and have less than 2,200 hours TIS.

(b) Within 10 hours TIS or 30 days, whichever occurs first, for helicopters with blades, P/N A016-1, replace the blades with airworthy blades, P/N A016-2 or A016-4.

(c) Within 10 hours TIS or 30 days, whichever occurs first, determine the age of each blade:

(1) For a zero-hour TIS (new) blade delivered with an Airworthiness Approval tag, the time begins on the date stated on that tag. For a blade older than 9 years that pre-dates the use of the Airworthiness Approval tag and was delivered as a new blade with a "yellow tag," the time begins on the date stated on that tag. Any subsequent yellow tag issued for a blade after the blade was placed into service is not valid for determining the original manufacture date.

(2) For a new blade that has neither an Airworthiness Approval tag nor a yellow tag because it was delivered on a factory-new helicopter, the time begins on the date stated on the original Airworthiness Certificate as documented in the aircraft maintenance records.

(3) For a new blade installed on an overhauled helicopter, the time begins on the date the helicopter was returned to service after overhaul as documented in the aircraft logbook or work report.

(4) For all other blades, the time begins on the date of manufacture. This date can be obtained from the manufacturer by providing them the serial number and part number.

(d) Within 10 hours TIS or 30 days, whichever occurs first, for helicopters with blades, P/N A016-2, replace the blades with airworthy blades on or before reaching 2,200 hours TIS or 10 years, whichever occurs first.

(e) Within 10 hours TIS or 30 days, whichever occurs first, revise the component history card or equivalent maintenance record for blades, P/N A016-2, by adding a 10-year retirement life to the current 2,200 hours TIS retirement life.

(f) Revise the Airworthiness Limitations section of the applicable maintenance manual by adding a new retirement life of 10 years to the current 2,200 hours TIS retirement life for blades, P/N A016-2.

Note: Robinson Model R22 Maintenance Manual, dated January 16, 2004, contains the revised Airworthiness Limitations section.

(g) To request a different method of compliance or a different compliance time for this AD, follow the procedures in 14 CFR 39.19. Contact the Los Angeles Aircraft Certification Office, Transport Airplane Directorate, FAA, for information about previously approved alternative methods of compliance.

(h) Special flight permits will not be issued.

(i) This amendment becomes effective on October 7, 2004.

Issued in Fort Worth, Texas, on September 16, 2004.

David A. Downey,
Manager, Rotorcraft Directorate, Aircraft Certification Service.

[FR Doc. 04-21269 Filed 9-21-04; 8:45 am]

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